

#### ABSTRACT

[0071] This invention provides a system for customizing musical instrument signal processing enabling users to produce different tonal characteristics in created musical pieces. In order to create such tonal characteristics, a new mathematical model of tonal characteristics may be digitally created based on two or more initial mathematical models of tonal characteristics. After simulating a first and second initial mathematical models of tonal characteristics, the new mathematical model is created by interpolating one or more coefficients of the first and second initial mathematical models. The new mathematical model may also adjust a control parameter where the control parameter may exist between two values. When the control parameter is the first value, the new mathematical model is the first initial mathematical model. When the control parameter is the second value, the new mathematical model may be the second initial mathematical model. When the control parameter is located at a point between the first and second values, the new mathematical model may represent a convergence between the first and second models.